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NOTES ON GEOGRAPHIC DISTRIBUTION

Amphibia, Anura, Hylidae, *Scarthyla vigilans*: Range extensions and new state records from Delta Amacuro and Miranda states, Venezuela.

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Scarthyla Duellman & De Sá, 1988 is a Neotropical genus with two recognized species: *S. goinorum* (Bokermann, 1962) and *S. vigilans* (Solano, 1971). These frogs are characterized by its small size, slender body shape, unwebbed fingers, and almost fully webbed toes (Duellman and De Sá 1988). Both species are almost identical morphologically and osteologically, but differ slightly in mating call and largely in tadpole morphology (Duellman and De Sá 1988; Barrio-Amorós et al. 2006).

Scarthyla vigilans was originally thought to be endemic to the Maracaibo Lake basin in Venezuela (La Marca 1992; Barrio-Amorós 1998). Mijares-Urrutia et al. (1998) recorded an apparently isolated population from the state of Falcón in northwestern Venezuela, and Barrio-Amorós et al. (2006) reported a widely extended distribution throughout Venezuela and Colombia for this species. Rojas-Runjaic et al. (2007) documented its distribution north of Maracaibo Lake basin and on the northwestern piedmont of Sierra de Perijá. It is currently known from the northern Caribbean lowlands and Magdalena River basin in Colombia, the Maracaibo Lake basin, and Llanos of Colombia and Venezuela (Barrio-Amorós et al. 2006).

Herein we report two additional localities that extend the distribution of the species to two different Venezuelan bioregions (sensu Barrio-Amorós 1998), Coastal Range and Orinoco Delta. During a biodiversity survey carried out in Caño Macareo in the Orinoco Delta, state of Delta Amacuro, northeastern Venezuela (09°48'32" N, 61°40'29" W; 5m), from 16 to 25 May 2006, FRR and JCS found several specimens of *Scarthyla vigilans* (Figure 1). Six specimens were collected and deposited at the *Museo de Historia Natural La Salle*, Caracas (MHNLS 17734, 17754-8).

Figure 1. *Scarthyla vigilans* from Caño Macareo, northwestern Venezuela. Photo by J. C. Señaris.

These specimens were observed active at 20:00 h, dwelling on bushes, in a small pond inside a coastal mangrove forest. Several males were calling actively, and couples were observed in amplexus demonstrating that they constitute an established population in this estuarine habitat. An additional specimen was found in a floating *Eichhornia* raft anchored to herbaceous vegetation

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along river edge. Other sympatric frogs in this deltaic locality were *Rhinella marina*, *Dendropsophus microcephalus*, *Hypsiboas boans*, *H. geographicus*, *Scinax ruber*, *Pseudis paradoxa* and *Leptodactylus pallidirostris*.

The record from the Venezuelan Coastal range is based on a single individual photographed (Figure 2) by ICF during a field botanical assessment development in a wetland near El Clavo Dam, state of Miranda (10°15'16.9" N, 66°07'53.9" W; 14 m), on 2 August 2007. In this locality, *S. vigilans* was particularly abundant and several males were observed calling actively at around 15:30 h, in grasslands, semiaquatic, and aquatic foliage of the wetland.

Figure 2. *Scarthyla vigilans* from El Clavo Dam, northern Venezuela. Photo by I. C. Fedón.

The specimens from both localities are the first records of the species from Delta Amacuro and Miranda states, and the former represents its easternmost distribution (Figure 3). The nearest locality previously reported is Sanare, state of Falcón, Venezuela (Mijares-Urrutia et al. 1998), 253 km WNW from El Clavo Dam, and 745 km WNW from Caño Macareo in Delta Amacuro.

These new records are of special interest, first because the important distribution extension and second because both regions have been historically well sampled and no previous records of the species exist in literature or collections. This can be attributed to one of two possible causes (or both inclusive): 1) as noted by Barrio-Amorós et al. (2006), the soft call of the species makes them inconspicuous and difficult to locate, especially when other amphibians with more powerful calls are active; and/or, 2) *Scarthyla vigilans* is currently undergoing geographic expansion, and has recently colonized new habitats north and east of its original distribution range. This geographic expansion may be aided by the dispersion of free-floating macrophyte rafts (e.g. water hyacinth *Eichhornia* spp.), which represents highly diverse amphibian habitats (Hödl 1977; Señaris 2004; Señaris and Ayarzagüena 2004) and can be carried by the wind and tides, acting like great distance dispersal vectors for their associated fauna (Schiesari et al. 2003).

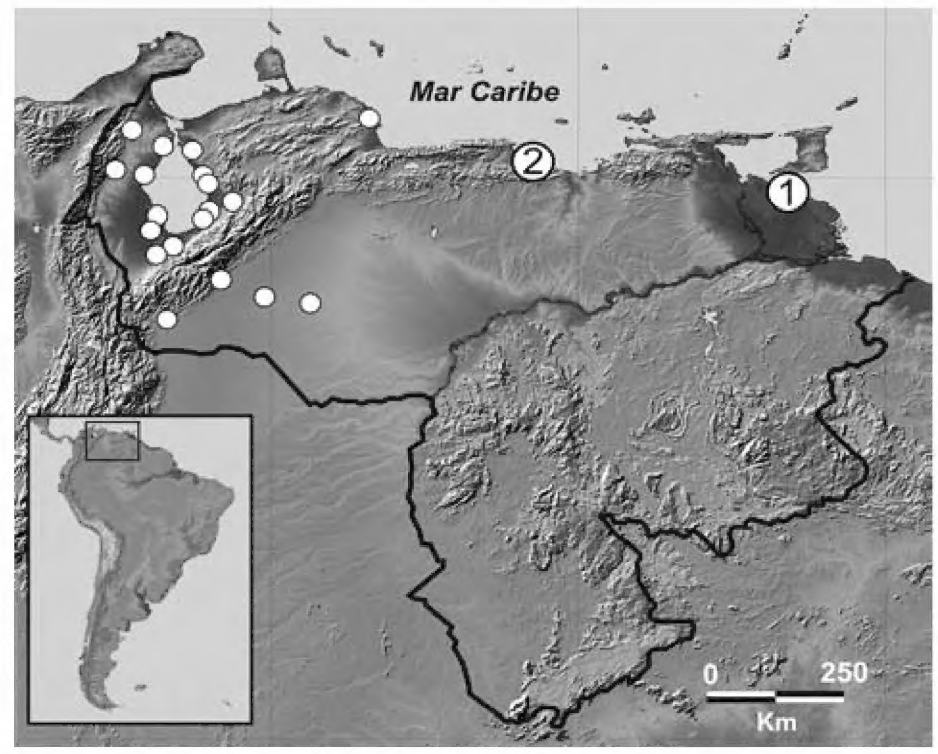

Figure 3. Distribution map of *Scarthyla vigilans* in Venezuela. White dots: records in literature (Barrio-Amorós et al. 2006). 1: Caño Macareo, Orinoco Delta, state of Delta Amacuro, northeastern Venezuela. 2: El Clavo, state of Miranda, northern Venezuela.

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